

PATENT ABSTRACTS OF JAPAN

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(21)Application number : **10-218940**

(71)Applicant : **DAIWABO CO LTD**
NIPPON VALQUA IND LTD

(22)Date of filing : **03.08.1998**

(72)Inventor : **KIRIKAWA MAYUMI**
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(54) **SILK PROTEIN FINE POWDER AND ITS PRODUCTION**

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain silk protein fine powder capable of imparting synthetic leathers, rubbers, coating materials, textile fibers, films, sheets, etc., with hygroscopicity, moisture-releasing nature antistaticity, etc. or improving their feel of touch or feeling through addition thereto, and to provide a method for producing the silk protein fine powder.

SOLUTION: This silk protein fine powder consists of 5-30 wt.% of sericin with an average molecular weight of 7,000-300,000 and 95-70 wt.% of silk fibroin with an average particle size of $\leq 30 \mu\text{m}$ and the maximum particle size of $\leq 60 \mu\text{m}$. This silk protein fine powder is obtained by scouring silk to prepare a silk-scoured product composed of 5-30 wt.%, on a dry basis, of sericin and 95-70 wt.% of silk fibroin followed by drying and then grinding the silk-scoured product.

LEGAL STATUS

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DERWENT-ACC-NO: 2000-217988

DERWENT-WEEK: 200028

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TITLE: Silk protein powder for synthetic
leather, rubber, coating material, fibers, films and
sheets comprises predetermined amounts of sericin and
silk fibroin and has specific particle size and diameter

PATENT-ASSIGNEE: DAIWABO CO LTD[DAIW] , NIPPON VALQUA IND
LTD[NIVAN]

PRIORITY-DATA: 1998JP-0218940 (August 3, 1998)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	
LANGUAGE		MAIN-IPC	
JP 2000044598 A		February 15, 2000	N/A
008	C07K 014/435		

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP2000044598A	N/A	
1998JP-0218940	August 3, 1998	

INT-CL (IPC): A01N063/00, B29B009/12 , B29B013/10 ,
C07K014/435 ,
C09K003/16 , D06M015/15

ABSTRACTED-PUB-NO: JP2000044598A

BASIC-ABSTRACT:

NOVELTY - The silk protein fine powder consists of 5-30
weight percent (wt.%)
of sericin and 95-70 wt.% of silk fibroin. Mean particle
diameter of powder
particles is 30 mu m or less and maximum particle size is

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60 mu m or less.

Average molecular weight of sericin is 7000-300000.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for manufacture of silk protein fine powder which involves cleaning and refining the silk containing 5-30 weight percent (wt.%) of sericin and 95-70 wt.% of silk fibroin followed by drying. The dried product is ground to obtain silk protein fine powder.

USE - For synthetic leather, rubber, coating material, fibers, films and sheets.

ADVANTAGE - Silk protein fine powder is manufactured efficiently without causing environmental problem. The silk protein powder has water absorbent, damp releasing property, moisture permeability, antistatic property and atopy-proof properties.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: SILK PROTEIN POWDER SYNTHETIC LEATHER RUBBER COATING MATERIAL FILM

SHEET COMPRISE PREDETERMINED AMOUNT SERICIN
SILK FIBROIN SPECIFIC
PARTICLE SIZE DIAMETER

DERWENT-CLASS: A60 F06 F08 G02

CPI-CODES: A03-C01; A11-A04; A12-S09A; F03-C; F04-B01;
G02-A05;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1]

018 ; R24068 G3714 P0599 D01 F70 ; S9999 S1070*R ;
S9999 S1514 S1456
; S9999 S1285*R ; S9999 S1581

Polymer Index [1.2]

018 ; ND01 ; ND07 ; N9999 N6688 N6655 ; N9999 N6780*R
N6655 ; B9999
B5094 B4977 B4740 ; B9999 B5209 B5185 B4740 ; Q9999
Q7114*R

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers:

C2000-066670

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DOCUMENT-IDENTIFIER: JP 2000044598 A
TITLE: SILK PROTEIN FINE POWDER AND ITS
PRODUCTION
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INVENTOR-INFORMATION:

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AKIYAMA, DAIJIRO	N/A

ASSIGNEE-INFORMATION:

NAME	COUNTRY
DAIWABO CO LTD	N/A
NIPPON VALQUA IND LTD	N/A

APPL-NO: JP10218940

APPL-DATE: August 3, 1998

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, C09K003/16

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain silk protein fine powder capable of imparting synthetic leathers, rubbers, coating materials, textile fibers, films, sheets, etc., with hygroscopicity, moisture-releasing nature antistaticity, etc. or improving their feel of touch or feeling through addition thereto, and to provide a method for producing the

silk protein fine
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with an average molecular weight of 7,000-300,000 and 95-70
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fibroin with an average particle size of

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